

## IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

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Rosalie Ann Centeno Ann Ce as first class mail in an envelope addressed to: Assistant Commissioner for Patents, Washington, D.C. 20231 on\_ November 27, 2001.

In the application of:

Peter Birke, et al

Serial Number:

09/830,131

Filing Date:

October 15, 1999

For:

PASTE-LIKE MASS WITH INORGANIC LIQUID CONDUCTORS AND

LAYERS AND ELECTROCHEMICAL ELEMENTS, PRODUCED

THEREFROM.

**Assistant Commissioner for Patents** 

Washington, DC 20231

## INFORMATION DISCLOSURE STATEMENT

In accordance with 37 CFR § 1.56, Applicant wishes to call the attention of the Examiner to the following references:

- 1) US 5,707,759 <sup>2</sup>
- 2) JP Derwent-Abstract 1994: 212521/26 of JP 061 50973
- 3) JP CAPLUS Abstract 1998: 656002 of JP 10270023
- 4) WO 98/26468
- 5) WO 95/16285
- 6) WO 96/38868 A1
- 7) EP 379 372 A1

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OIPE				Applicati n Number	09/830,131 October 15, 1908 Peter Birke et al.			
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DEC 1 1 2001 & U. S. PA				First Named Inventor	Peter Birk	e et el	15/1.	
				Group Art Unit		- O.C. 7	VA	
- /	<del>),                                    </del>	<u> </u>		Examiner Name		No.	320	
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	101		II S PA	TENT DOCUMENTS	1000000	<del>- 77</del>	7	
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Complete if Known

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- 10) US 5,009,970
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- 26) G. Feuillade et al, Journal of Applied Electrochemistry 5 (1975) 63-69
- 27) EP 528 557 B1
- 28) DE 39 29 316 A1
- 29) WO 98/18173
- 30) WO 97/49106
- 31) US 5,648,011
- 32) WO 99/44245
- 33) US 6,001,509
- 34) Patent Abstract of Japan 1999/05, JP 11 031 414 A

References 1 - 24, and 26 - 27 are in the English language and need no further discussion as to their relevance.

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Reference 25, EP 762 525 A1, discloses that the invention concerns an anode for a rechargeable lithium cell comprising a conductive support and a paste containing an electrochemically active material into which lithium can be inserted and a polymer binder. The anode comprises a conductive support and a paste containing an electrochemically active material into which lithium can be inserted and a polymer binder, the anode being characterized in that said binder is a vinyl polymer selected from polyvinyl alcohol (PVA) with the formula (--CH<sub>-2</sub> --CHOH---)<sub>n</sub>, polyvinyl butyral (PVB) and copolymers and mixtures thereof.

Reference 28, DE 39 29 316 A1 discloses that an ion conductor/electrolyte especially suitable for lithium batteries is comprised of a chemically inert, electronically nonconducting solid powder and an electrolyte salt solution with an aprotic solvent. The ion conductor has a solid to pasty consistency depending upon the ratio of the mixture's components and has a specific conductivity (K) of a magnitude >10<sup>-3</sup> S/cm at room temperature. Using this ion conductor, solid batteries can be developed with output capacities similar to those previously available only in connection with liquid organic electrolyte systems. Among others, SiO<sub>2</sub>, Al<sub>2</sub>O<sub>3</sub> and TiO<sub>2</sub> are favorable solids as carriers, especially with extensive surface areas. The liquid phase, which is immobilized by adsorption on these carriers, is formed of a solution of lithium or sodium salts in propylene carbonate, acetonitrile, gamma-butyrolactone, nitromethane, tetrahydrofuran and dimethoxyethane, or similar solvents.

References 29 - 34 have been cited in the International Search Report and are submitted to provide the Examiner easy access to said references.

Copies of the listed documents are submitted herewith along with the form PTO-1449.

Consideration of the foregoing in relation to this application is respectfully requested.

Respectfully submitted,

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